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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,631	04/11/2001	Robert K. Rowe	1023.1123101	1809
28075	7590	01/02/2004	EXAMINER	
CROMPTON, SEAGER & TUFTE, LLC 1221 NICOLLET AVENUE SUITE 800 MINNEAPOLIS, MN 55403-2420			CURTIS, CRAIG	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,631

Applicant(s)

ROWE ET AL.

Examiner

Craig H. Curtis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 8, 10, 12, 17, 20-28, 36, 41, 44-52 and 54-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 11, 13-16, 18, 19, 29-35, 37-40, 42, 43 and 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Disposition of the Instant Application

- This Office action is responsive to Applicants' Amendment B filed on 8 October 2003 and made of record in the file as Paper No. 16.
- No claims were amended by this amendment.
- Claims 1-62 are currently pending in the instant application, claims 8, 10, 12, 17, 20-28, 36, 41, 44-52, and 54-62 having previously been withdrawn from further consideration by the examiner as being drawn to non-elected inventions. Accordingly, claims 1-7, 9, 11, 13-16, 18, 19, 29-35, 37-40, 42, 43, and 53 will be examined as to their merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-7, 9, 11, 13-16, 18, 19, 29-35, 37-40, 42, 43, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando et al. (5,422,4830) in view of Utzinger et al. (6,571,118) and Tague, Jr. et al. (5,923,036).

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Ando et al. disclose the instant invention as claimed--a spectrometer system for performing spectroscopic determination on biological media, the spectrometer system comprising:

a light source for generating light (See Fig. 1, 1b);

an optical filter (4) positioned to receive light from said light source, said optical filter comprising a circular variable filter (a linear variable filter being an obvious, well-known alternative to same);

a sampler (See Fig. 1) for transmitting the light into the sample and for receiving the non-absorbed light from the sample (17); and

a detector (See Fig. 5) for receiving said non-absorbed light and for generating an electric signal indicative of the non-absorbed light.

further comprising an optical integrating chamber (Fig. 1, integrating sphere 6) wherein light reflected from an optical filter is substantially directed into the chamber and then reflected back to said optical filter (inevitable, to however small a degree);

wherein said spectrometer system has a signal-to-noise ratio (inherent), and wherein said integrating chamber increases said signal-to-noise ratio (also inherent);

wherein said integrating chamber allows direct illumination of the filter from the light source (See Fig. 1);

wherein said integrating chamber is an orthogonal design to preserve angular qualities of the light entering said integrating chamber (See Fig. 1);

wherein said sampler is disposed adjacent to said detector (See Figs. 2, 5);

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wherein said optical filter is disposed adjacent said light source (See Fig. 1)--EXCEPT FOR explicit teachings of the following claimed limitations:

wherein said optical filter has a plurality of bandpass regions, wherein light within a bandpass region is transmitted through said filter;

wherein said optical filter comprises one or more dielectric bandpass filters;

wherein said optical filter comprises a non-linear variable filter;

wherein said optical filter comprises a plurality of individual bandpass filters;

wherein said optical filter comprises a

an optical encoding unit positioned for encoding selected frequencies of light passing through said optical filter, wherein said optical encoding unit comprises a spatial light modulator.

However, Utzinger et al. provides a teaching of an optical filter (col. 8, ll. 28-33) that impliedly has a plurality of bandpass regions, wherein light within a bandpass region is transmitted through said filter; wherein said optical filter comprises one or more dielectric bandpass filters (See abstract; otherwise, inherent) wherein said optical filter has a plurality of bandpass regions (Id.); wherein light within a bandpass region is transmitted through said optical filter; and Tague, Jr. et al. provides a teaching of an encoding unit (14 in, e.g., Figs. 1 & 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of Ando et al. such that it comprise an optical filter having a plurality of bandpass regions, wherein light within a bandpass region is transmitted through said filter; wherein said optical filter comprise one or more dielectric bandpass filters; wherein said optical filter has a plurality of

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bandpass regions, and wherein light within a bandpass region is transmitted through said optical filter, as taught by Utzinger et al. for at least the purpose of increasing the utility of said spectrometer system as an analyzing instrument.

With regard to Ando et al.'s lack of teaching of an optical encoding unit positioned for encoding selected frequencies of light passing through said optical filter, wherein said optical encoding unit comprises a spatial light modulator, the teaching of just such an encoding unit by Tague, Jr. et al. (viz., spatial light modulator 14) is presented, and it is asserted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of the combination such that it further comprise such an optical encoding unit, for at least the purpose of altering (read: encoding), to a desired degree, frequencies of light passing through said optical filter of the spectrometer system of the combination, such that said sample be exposed to a desired frequency spectrum, and, further, such that the portion of a sample responsible for a given spectroscopic signal output by a particular detector element can be pinpointed.

Response to Arguments

2. Applicants' arguments with respect to the claims, filed on 8 October 2003, have been fully considered but have been rendered moot in view of the new ground(s) of rejection.

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Contact Information

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (571) 272-2311. The centralized facsimile phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature regarding to status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.



Audrey Chang
Primary Examiner
Technology Center 2800

C.H.C.
Craig H. Curtis
Group Art Unit 2872
29 December 2003